

REMARKS/ARGUMENTS

Claim 1 has been amended to further clarify that “short period of time” means 1 hour or less. Support for this amendment exists, for example, in original claim 13.

The dependency of claim 14 has been changed.

Claims 1-12 and 14-33 are pending in this application, although claim 4 has been withdrawn from consideration. Upon indication of allowable subject matter, Applicants currently intend to seek rejoinder of claim 4 as appropriate.

The Office Action rejected the pending claims under 35 U.S.C. § 112, second paragraph, as being indefinite because of the phrase “a short period of time.” Applicants respectfully submit that in view of the above amendment to claim 1, this rejection has been rendered moot and should be withdrawn.

The Office Action also rejected claims 1-3, 5-12 and 14-28 under 35 U.S.C. § 103 as obvious over Ravet. In view of the following comments, Applicants respectfully request reconsideration and withdrawal of this rejection.

The claimed processes relate to preparing a composite material by thermally decomposing for one hour or less a homogeneous mixed precursor containing all the elements forming the electrode active compound as well as one or more organic and/or organometallic compounds. According to the claimed processes, thermal decomposition can be thought of as occurring “in a single step” for a short period of time given that all materials to be subject to thermal decomposition are present in the mixed precursor.

At least some of the benefits associated with the invention processes are set forth in the present application (see, page 30, line 16 to page 31, line 11, as well as page 14, line 19 to page 17, line 7, particularly page 14, line 19 to page 15, line 14 and page 16, lines 1-17) and

include, for example, improved purity, improved homogeneity, improved rapidity, improved morphology, etc.

Ravet neither teaches nor suggests such processes, or any of the benefits associated with the processes. To the contrary, rather than subjecting all of the elements to thermal decomposition “in a single step” for a short period of time (1 hour or less), Ravet’s methods can be thought of as “two-step” methods over a long period of time (at least three hours).

In maintaining the pending rejection, the Office Action asserted that 3 hours was deemed to be a short period of time, so Ravet’s processes including a 3 hour thermal decomposition step were essentially the same processes as the invention methods. However, the pending claims have been amended to require thermal decomposition for 1 hour or less. Nothing in Ravet’s disclosure would teach or suggest the presently required short period of time for thermal decomposition.

Ravet’s processes include a 3 hour thermal decomposition step. When this 3 hour thermal decomposition occurs, only the outer carbonaceous portion of the composite is thermally decomposed. That is, the active material on the interior of the electrode is not thermally decomposed during this step (such interior material has to be decomposed during an earlier, time-consuming step prior to forming the composite). Thus, for Ravet’s materials to undergo thermal decomposition, they must undergo not only the 3 hour decomposition referred to by the Office Action (which decomposes the outer carbonaceous layer), but also a previous decomposition period for the interior active material. Clearly, the time required for thermal decomposition is much greater for Ravet’s methods than in the present invention. For at least this reason, Applicants respectfully request reconsideration and withdrawal of the obviousness rejection.

Furthermore, Ravet neither teaches nor suggests “single step” methods. As discussed in the present application, Ravet (CA 2,270,771) discloses two-step processes in which (1)

the active compound is prepared; and (2) after the active compound is prepared, the composite is formed. (See, page 4, lines 13-29 of the present application). More specifically, Ravet discloses first preparing an electrode active material, and then homogeneously depositing a conductive carbonaceous material on the surface of the electrode active material to form a composite material. Indeed, Ravet's examples consist solely of such two-step methods, with Ravet first preparing the electrode active material, and then forming the composite. Example 3 discloses forming a composite from  $\text{LiFePO}_4$  material previously prepared ("prepared above"). Example 4 discloses forming a composite from  $\text{LiFePO}_4$  "already prepared." Example 5 discloses forming a composite from  $\text{LiFePO}_4$  "already synthesized." Example 6 discloses forming a composite from a "first synthesized"  $\text{LiFePO}_4$ . Nothing in Ravet teaches or suggests the "one-step" invention methods. For this reason as well, Applicants respectfully submit that the obviousness rejection should be reconsidered and withdrawn.

Clearly, Ravet's methods which are "two-step" methods over a long period of time (at least three hours) neither teach nor suggest the invention methods which subject all of the elements to thermal decomposition "in a single step" for a short period of time (1 hour or less).

For all of the above reasons, Applicants respectfully request reconsideration and withdrawal of the § 103 rejection based upon Ravet.

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Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

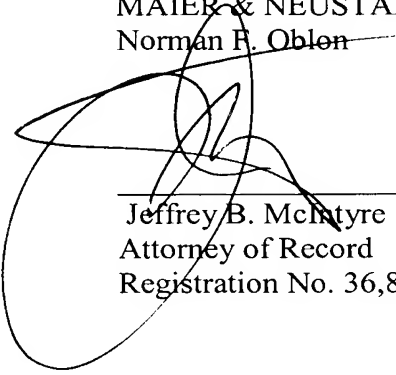
Respectfully submitted,

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